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CARNEGIE

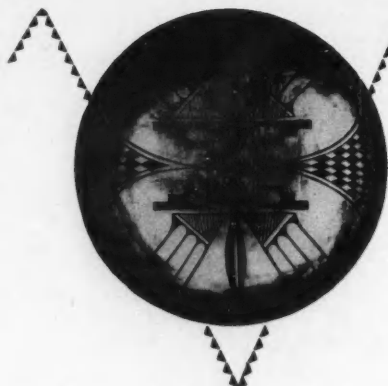
MAGAZINE

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December 1955



*Black pottery tray, produced at
the Pueblo of San Ildefonso,
by a people famous for
the delicacy and beau-
ty of their pottery.
On exhibit at
Carnegie
Museum.*

AN AMERICAN INDIAN ECONOMY

This exquisite piece of pottery, with its interesting geometric design, is typical of the culture achieved by one segment of the American Indians . . . those southwestern tribes that lived in pueblos.

In the northwest, tribes were largely nomadic, depending largely upon hunting and fishing for their livelihood. Many of the southern and southwestern tribes, however, congregated in permanent camps or pueblos. Here, various crafts and industries, as well as agriculture, were developed to a high degree.

A common denominator of all American Indian tribes, however, was their dependence on barter to obtain the necessities of life. Because there was no trade or commerce, no "money" was in use—barter being the means of exchanging goods or services, supplemented sometimes by the use of wampum or knotted ropes.

For their semi-primitive type of existence, barter was ideally suited to the Indian tribes. Only as the "whites" began to develop the land, and carry on a wide trade in commodities, did the need for currency become apparent. Thus—as throughout history—fiscal practices have developed as the economic needs of the country have become more complex.

MELLON NATIONAL BANK AND TRUST COMPANY

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CARNEGIE INSTITUTE 4400 Forbes Street, Pittsburgh 13, Pennsylvania

Weekdays 10:00 A.M. to 5:00 P.M.

Tuesdays 10:00 A.M. to 10:00 P.M.

The INTERNATIONAL: weekdays 10:00 A.M. to 10:00 P.M.

Sundays 2:00 to 5:00 P.M.

Institute closed December 25, 26; January 1, 2

CAFETERIA OPEN FOR VISITORS TO THE BUILDING

Luncheon 11:00 A.M. to 2:00 P.M., weekdays

Snack Bar 2:00 to 5:00 P.M., weekdays

Dinner 4:30 to 7:00 P.M., December 1, 6, 8, 13, 15

CARNEGIE LIBRARY OF PITTSBURGH 4400 Forbes Street, Pittsburgh

Weekdays 9:00 A.M. to 9:00 P.M., reference services to 10:00 P.M.

Sundays 2:00 to 5:00 P.M.

Library closed December 25, 26; January 1, 2

Library closed Christmas Eve 5:00 P.M., New Year's Eve 6:00 P.M.

COVER

A spray of the Douglas fir from the Northwest, sketched by O. E. Jennings. This tree and the delightfully fragrant balsam fir of the northeastern states and adjacent Canada are the most desirable of our Christmas trees. Both have beautiful sprays of small, flattish, dark green leaves, which do not fall off when dry as do the squarish needles of the commonly used spruces.

Dr. Jennings is honorary curator of plants and director emeritus of Carnegie Museum, as well as president of The Academy of Science and Art of Pittsburgh.

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DECEMBER CALENDAR

CHRISTMAS CAROL FESTIVAL

December 11 is the date for this local highlight of the Yuletide season. Details are given on page 333.

Marshall Bidwell's regular organ recitals from 4:00 to 5:00 o'clock each of the other Sunday afternoons in Music Hall will feature Christmas music this month.

1955 PITTSBURGH INTERNATIONAL

The fortieth INTERNATIONAL EXHIBITION OF CONTEMPORARY PAINTING, with 328 paintings from 23 countries, continues through December 18. Ballots may be cast for the popular prize of \$200 from November 28 through December 11.

Gallery hours are 10:00 A.M. to 10:00 P.M., weekdays, and 2:00 to 5:00 P.M., Sundays.

HOECHST PORCELAIN

More than thirty pieces of tableware and figurines manufactured at Hoechst, Germany, near Mainz, in the eighteenth century, are on exhibit in the Treasure Room adjoining the Hall of Decorative Arts. They are lent by Mr. and Mrs. Robert Carman Alberts.

FOR STAMP-COLLECTORS

Bernard Davis, director of the National Philatelic Museum in Philadelphia and a collector of modern art, will give an illustrated lecture on "Art on Postage Stamps" Wednesday, December 7, at 8:00 P.M., in Lecture Hall. Gordon Bailey Washburn will briefly review the 1955 INTERNATIONAL at the same time.

Tickets for buffet dinner in the Institute cafeteria and a reserved seat in Lecture Hall, plus two general admission tickets, may be secured at cost of \$3.50 from Charles E. Wise, of Alling & Cory Company. The event is sponsored by the Philatelic Centurions of Carnegie Museum, of which L. Willoughby Jacobs is president.

GIFT BOOKS

Lists of new books for gifts both to adults and to children are now available at Carnegie Library of Pittsburgh. New books have also been arranged on display.

HOBBY CLASSES

Adult hobby classes close December 16 and will resume for the new term on January 9. Registration will be taken at the Education office January 3-6, daytime and evening; on January 7, during the day only. Drawing and painting, photography, sculpture, music appreciation and workshop, ballet, nature study, interior decorating, flower arranging, sewing and millinery will be given.

CARNEGIE INSTITUTE SOCIETY LECTURES

Mondays, 8:15 P.M., Mellon Auditorium, Mr. Lebanon

Tuesdays, 6:30 and 8:30 P.M., Carnegie Music Hall

Admission by membership card

December 5, 6—OUR FABULOUS GREAT LAKES

(Harmony Dairy Company, sponsor)

Clifford Kamen will show the scenic wonders and impressive transportation service of this chain of waterways reaching into the Midwest, enjoyed by vacationing millions.

December 13, 14—HEART OF AFRICA

(Note that Mr. Lebanon showing is on Wednesday)

John N. Booth will take us on a memorable tour of primitive and civilized areas of the Dark Continent, including pictures of Dr. Albert Schweitzer's headquarters in French Equatorial Africa.

The next lectures will be January 9 and 10, after the Christmas holidays.

WALKING TALKS

The 7:00 to 7:45 P.M. tour, on Tuesday, December 6, will visit Bird Hall; on December 13, Mammal Hall. The public is invited to join these tours.

DOLLS OF THE U. N.

Costume dolls representing 57 of the 60 member nations are on display in the Museum-Library hallway, marking the tenth anniversary of the United Nations. The dolls are lent by the Pittsburgh Doll Club, recent gifts of friends, and taken from the Museum collection.

MAMMAL HALL

Two cases of single mounts, showing North American Mammals and Tropical Mammals, newly labeled and arranged, may now be seen in the Hall of North American Mammals, along with other rearrangements.

TAM O'SHANTERS

Parents will visit the Tam O'Shanters, creative art class for selected fifth-graders, in Music Hall on the morning of Saturday, December 10.

SATURDAY-AFTERNOON MOVIES

Free movies for children on wildlife and travel will continue in Lecture Hall at 2:50 o'clock each Saturday except December 24 and 31.

STORY HOUR

Story hour for five- to twelve-year-olds, with special emphasis this month on Christmas, continues each Saturday at 2:15 P.M., at the Library.

Story hour for three- to five-year-olds will be held at 10:30 A.M., on Tuesday, December 13, in Boys and Girls Room, with a talk for mothers by a Library staff member at the same time.



PERUVIAN CARRIER. FILIPINO CART WITH BUFFALO. TRANSPORTATION EXHIBIT.

TO CARRY A THING FROM HERE TO THERE

JAMES L. SWAUGER

SOON come the days when all good men trot out their model trains and villages and set them round the Christmas tree. It seems as good a time as any to talk about Carnegie Museum's model trains and ships and wagons, and what we're doing with them.

For many years the Museum has had a display of transportation models on the third floor. They've been used extensively by the public schools of the city and have always exerted considerable fascination for general visitors. The models are excellent. The display was fine for its time, but these are different times, and we have decided to refurbish cases and rearrange models to present a more attractive, more coherent, and, we hope, more useful story of transportation.

Part of this project is finished; the rest is under way.

The general theme of the exhibit is power, the power used to move a load from one place to another. At what we call the beginning of the display—although to be sure it may be the end for a visitor, depending on the direction from which he entered the exhibit area—are examples of the use of human muscle to transport loads. We feel sure this was the original power source, and we know it is one still in use, as can be proved readily by watching customers leave a store. Tiny figures show people of many lands—India, Switzerland, Colombia, Mexico, and others—carrying loads directly upon their backs, heads, or shoulders, and using a variety of

ingenious arrangements that permit man's muscles to be used more efficiently and more comfortably.

Most of these figures were made forty years ago by Theodore A. Mills, then a member of the Museum staff. Some, such as the Mexican figure donated by John C. Hill, and that from Colombia given by P. J. Byrne, are more recent accessions.

From the use of the power of human muscle to that of the power of animal muscle was the succeeding step in the lightening of man's work. A Bedouin camel caravan, a pack train in the Allegheny mountains, a mule with a load of wood, and other models illustrate this type of transport.

A specialization of the use of animal muscle in conjunction with various kinds of "machinery" is next. Horses hitched to such drags as a Sioux Indian *travois*, dogs pulling an Eskimo sled, and a Lapland reindeer-drawn sled are examples of this idea.

In the case with these models is illustrated what was probably the genesis of the wheel. Under the watchful eye of a whip-armed overseer, slaves pull a heavy block of stone by drag lines and rollers. It is logical to assume that such a use of logs suggested the idea of wheels.

Mills made most of the animal and human figures used in this series of models, too. Many of the wooden constructions, the drags and *travois* and rollers, were built by Wilson A. Banks, a former Museum carpenter-shop foreman, who worked closely with Mills. Banks also made some of the wagons and trains used in other parts of the exhibits.

Among other examples of wheeled vehicles, we show a Conestoga wagon, a stagecoach, an Egyptian chariot, and a Japanese jinrikisha. Here is a further advance in the use of power, but the source remains the same, either animal or human muscle.

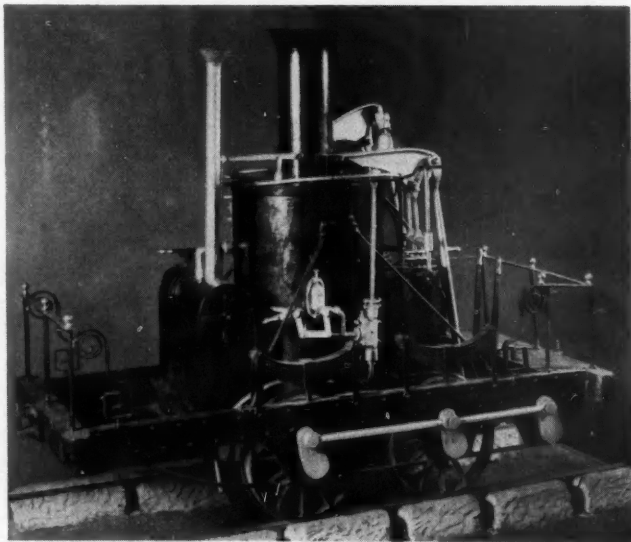
A new source of power came into use late

in the eighteenth century, and was applied to transportation early in the nineteenth. This was steam. We illustrate its use on land by various models of steam-driven vehicles, from Murdock's engine of 1786, which ran without rails, through the 1830 "Tom Thumb" and the 1836 "Arabian" locomotives built for the Baltimore and Ohio Railroad, to a modern English steam engine. There are also models of early Pennsylvania-Railroad and Perth-and-Amboy coaches, to give some idea of how uncomfortable passengers must have been during the early use of such vehicles. We have no modern Diesel models, but after all, they still run, and he who would see them can go to the nearest railroad track and wait.

Some of these locomotive models were constructed by C. R. Luscombe, a commercial model-maker, and purchased early in the twentieth century. Others were gifts. Notable among these is the metal model of the "Saint Martin," a steam engine of the English Great Western Railway, built and donated by David N. Carlin. Another fine model is the 1876 "cabbage stack" locomotive, made from a single block of wood by Robert Stevenson Foster and donated by his daughters.

Rehabilitation to date has proceeded only this far, only through models illustrating land transport. Planning for continuation of refurbishing has been done, and the work is continuing. The new settings are the work of Robert Caffrey, of the Museum staff, under the direction of James W. Lindsay, chief of design. They plan to adapt the sort of construction ideas already used, to effective display of water and air craft. This will keep the entire background scheme in the same general

Asked if there are any model trains at the home of the two little Swaugers, the author replies, "I don't want anything in my house that isn't used every day." Mr. Swauger is curator of the Section of Man and assistant director of Carnegie Museum.



"THE ARABIAN" BUILT IN 1836 FOR THE BALTIMORE AND OHIO

tone but distinct enough from what has gone before to make apparent the transition from land transport to water transport, and from either of these to air.

On water both the muscles of man and steam are used, of course, but the power of water currents and the power of air currents are also available. We shall begin our display by showing rafts and other craft that rely mainly on the power of a water current supplemented by oars, poles, and sweeps. Then there are the various kinds of canoes and dugouts, from Venetian gondolas to Lake Superior birchbark canoes, to Gilbert Islands outriggers. We move from there to sailing vessels, and thence to steam-driven and oil-burning vessels.

We plan to devote a section of this water-transport display to our own western Pennsylvania area. The canal boats, the portage-railway boats, the lumber rafts, and stern-wheelers of our own rivers certainly deserve special consideration, and we plan to

give it to them before we are through.

Luscombe made many of the ships we have to show, and various donations gave us fine models, such as the gondola from Douglas Stewart, the birchbark canoe from Albert P. Beaver, and the Gilbert Islands outrigger from Frank J. Woodward. In 1949 we were happy to receive the notable collection of ship models of Frank A. Leovy, given in his memory by his daughters. This important addition assures us of as complete coverage of the story of water transport as our space allows.

We have not had enough models of airplanes to consider devoting a section of the exhibit to the use of the internal combustion engine—and now the jet engines—in conjunction with the pressure of air currents in transportation. Most of our models were either inventor's models of early twentieth-century planes that never were built, or were generalized models not really good enough for public display. In 1953 we received a fine

collection of warplanes from Paul Kern Hirsch, but while these do carry men and materials, they are not primarily cargo planes and must be supplemental in an exhibit devoted to transportation.

A brighter day is dawning, however. Recently TWA through Leonard Koster, Pittsburgh traffic manager, presented three models of TWA cargo and passenger airplanes to the Museum. The company intends to increase its gift by giving other models of earlier cargo planes used by TWA and its affiliates in the early days of flying in this country. Also, Pierre Digeon, resident representative of Air France in Pittsburgh, intends to present us with models of Air France transport planes, including modern jet liners, for our collection.

So there it is. We're on our way to presentation of a graphic story of transportation

methods. We move in the Museum exhibit from burdens tortuously borne on aching human back, to burdens hurtling through the sky in silver planes. We show the tale of the carrying of things from one place to another.

In itself this tale is interesting and important, but it has a far greater significance than as a unique tale. It is a chapter in the greater story of man's conquest of his world, the world that first forced him entirely to its will; the world that he is now slowly but surely using as he wills. This conquest by man is based on knowledge of the physical world and how it can be used, and the unknown man who first slung a burden on a pack frame because he thought it would make the carrying easier is as much a part of that story as an airplane factory's rows of design engineers.



Time is running out...



Most people put off making a Will until it's too late. You can't know when you will need a Will, and that's precisely why you need it NOW. Not tomorrow. Your loved ones deserve attention today.

Talk to your lawyer about it—you'll need his advice. He can see that your Will carries out your wishes and meets all legal requirements—and they are many.

In addition, we can help with your estate plans. Consult your lawyer and our Trust Department now, and plan for your family the kind of protection you know you want them to have.

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THE REHABILITATION FUND

MEMBERS and friends of Carnegie Institute and Library will be interested to know that the local drive for a million dollars to rehabilitate the building has reached 92 per cent of its goal. On the strength of this, the Board of Trustees has accepted a competitive low bid of \$600,000 to launch the building's most urgent project—replacement of five acres of dilapidated roof. Work will commence in a matter of weeks and will require about a year to complete.

This and the other major steps required to restore the building—replacement or repair of vast electrical, plumbing, heating and ventilating systems—will cost at least \$3¼ million. A grant from the Carnegie Corporation and appropriations by the City and County will provide \$2¼ million, a major part of which is conditional upon the success of the current public campaign.

Lawrence C. Woods, Jr., general chairman, and the campaign organization of trustees and other civic leaders have carried the drive effectively to four segments of the Pittsburgh community—industry, business and commercial firms, foundations, and individuals. With most major sources of contributions heard from, Mr. Woods and the other campaign officials point out that the drive must soon be terminated. They urge everyone who feels this project is important to the community to make a contribution without delay. A large portion of the remaining \$80,000 must come from individual contributors, and no gift is too modest to be important.

Campaign officials and the Board of Trustees wish to thank the many Society members and other friends of the Institute and Library who have given so unselfishly to the rebuilding fund. Equally gratifying is the spirit of sincere friendship and moral support these gifts imply. To those who may now be

considering year-end gifts of a charitable nature, it is suggested that few if any causes are of such lasting importance to the community as the restoration of this Library and Institute building, which has meant—and will continue to mean—so much to everyone in the tri-state area.

CHRISTMAS CAROL FESTIVAL



CAROL ANN HAZEEM and Jack Hakim, above, of St. George's Syrian Orthodox Church, offer traditional emblems in the Pageant of the Trees during the Christmas Carol Festival in Music Hall, to be held this year on Sunday, December 11. Some twenty costumed choruses will take part, singing Yuletide music from many lands.

The choir of St. George's will present under direction of Albert Hazeem a Christmas chant in the manner in which it is sung at St. Mary's Syrian Orthodox Cathedral in Damascus, one of the earliest churches in Christendom. A recording of the music was made for the Samuel Ely Eliots last summer during

(Turn to page 339)

COSTUME DOLLS OF THE UNITED NATIONS

MARIE L. RUSSELL

VISITORS pass, then suddenly stop to admire the colorful array of dolls from all corners of the globe, now on display in the Museum-Library corridor. This exhibit has been arranged to commemorate the tenth anniversary of the United Nations—the largest family of nations in our world. The display was prepared as a joint project by the Pittsburgh Doll Club, a member of the United Federation of Doll Clubs, and Carnegie Museum.

The foundations of the United Nations were laid at the Dumbarton Oaks Conference in Washington in 1944, by representatives of the United States, the United Kingdom, the Union of Soviet Socialist Republics, and China. The proposals made at this conference to establish an organization of nations for the maintenance of world peace prompted the calling of the United Nations Conference on International Organization at San Francisco in the spring of 1945.

At this conference, the Charter of the United Nations was drawn up and signed by fifty nations. Additional nations were admitted as members from time to time, until the membership totaled sixty in 1950. The Charter pledges all nations who signed to maintain international peace and security and to cooperate in establishing political, economic, and social conditions favorable to peace. It denies the right of the U.N. to intervene in the internal affairs of any nation.

The Charter became effective October 24, 1945, when the five permanent members of the Security Council—the United States, the United Kingdom, the U.S.S.R., France, and China—and a majority of the other nation members had ratified it.

Some of the dolls in this U.N. exhibition

are from collections donated to the Carnegie Museum by the following persons: Hilda G. Berkey, Edith G. Cole, Lawrence Litchfield, Mrs. John S. McCormick, Mrs. Elizabeth Holmes McLeod, Mrs. James Verner Scaife, and the Pittsburgh Doll Club.

There is a lovely group of seven dolls on loan from the Norwegian Bureau of Information in New York City. Six of these dolls are in pairs, a folk-dancing group. One of the pairs is evidently a bride and groom, and the other two couples are of the wedding party. The seventh in this group represents a Norwegian child, and she is beautiful beyond words.

Another interesting display is the two dolls on loan from the Danish Information Office in New York City. These are part of a permanent display maintained to show the lovely colorful costumes of the Danish people.

Then there are the delightfully interesting dolls on loan from the local Borkon Travel Service. The young farm couple have lovely features, and their costumes are true reproductions of those worn in Israel, the country from which they came. The wife is carrying a little lamb in her arms, a reminder of the people of biblical history.

The dolls in the two center cases of the exhibit represent the Big Five, the original members of the United Nations Security Council. On the top shelf to the right are exquisite portrait dolls, worthy representatives of the United States: George Washington, Abraham Lincoln, Uncle Sam, Franklin D. Roosevelt, and President Dwight D. Eisenhower. On the shelf just below is a fine

Miss Russell, a member of the Pittsburgh Doll Club, makes use of her own dolls in her social studies classes at East Pittsburgh Junior High School. She says her collection is mostly gifts from friends who travel.



DOLLS FROM CUBA, GREAT BRITAIN, CHINA, AND FRANCE GUARD THE UNITED NATIONS MODEL

model of the United Nations Building in New York City, and on the lowest shelf are dolls of the United Kingdom: the Beefeater, a Scotch lassie, a Welshman, Winston Churchill, and three of the Royal Family.

On the top shelf of the left-center case are the dolls from China. The ermine-trimmed, gold-embroidered costumes of the Emperor and Empress are most elaborate. The other dolls are two coolies, and a man and wife of the wealthy class. Next below, are the dolls from France: Napoleon, and two lovely girls—one probably from Brittany, as well as an adorable flower girl from Nice.

On the bottom shelf of the left-center case is a display of four books whose titles challenge the reading desires of all good citizens: *The United Nations* by Amry Vandenbosch and Willard N. Hogan; *U. N.: The First Ten Years* by Clark M. Eichelberger; *U. N.: Today and Tomorrow* by Eleanor Roosevelt and William DeWitt; and Trygve Lie's *In the Cause of Peace*.

The other cases contain the main display of dolls—147 in all—representing 57 of the 60 nations of the U. N. They are arranged alphabetically from left to right, from Carnegie Museum's rare doll from Afghanistan to the exotic lady from Yugoslavia.

Many of these dolls are on loan from members and friends of the Pittsburgh Doll Club: Rosemarye Bunting, Mrs. Max Johl, Sara Klemm, Dorothy Munroe, Marie L. Russell, Bertha Raynovich, Mrs. H. B. Thompson, Glenn Walker, Mrs. Harlan G. Wilson, and Mrs. George Zinsser.

One doll almost missed her place in the exhibit, arriving ten days late from Havana, Cuba, a gift to Carnegie Museum's collection. She made two trips to Pittsburgh before she came to stay because someone had mis-addressed her package. Now she has arrived and proudly represents her republic in this, one of the loveliest doll displays in the history of Pittsburgh.



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Pittsburgh, Pennsylvania





IN THIS NEW MURAL OF THE JURASSIC PERIOD BY OTTMAR VON FUEHRER, PTERANODON, A WINGED REPTILE, ANNOYS CLIDASTES, A MARINE LIZARD

FLYING REPTILES

J. LEROY KAY

THE Spanish proverb, " 'Take what you want,' says God, 'and pay for it,' " sums up pretty well in folk terms a fundamental truth about the evolution of living things. For some sixty millions of years, including a mere million or so witnessed by Man, the warm-blooded, hairy creatures that suckle their young have been successfully lording it over other forms of animal life. But for all their eminence they have remained earth-bound or water-bound—all, that is, but one group, bats, and certain gliding forms. The bats are all we have to show that mammals can take to the air as the chief means of getting from place to place. With this excep-

tion, the power of true flight has been developed only in birds and reptiles.

During the middle Mesozoic Era, some 150 million years ago, there were deposited in what is now Europe the remains of various pterosaurs or winged lizards. These were among the first fossil vertebrates discovered in the early days of paleontology, and the first specimen described was *Pterodactylus* (the wing-fingered), with the result that the whole order has become commonly known as pterodactyls.

This famous contemporary of the dinosaurs is represented at Carnegie Museum by a short-tailed skeleton, about the size of a dove, dis-

covered near Solenhofen in Bavaria. If you examined it casually, you might conclude that it was a remote ancestor of the birds. There are some points of resemblance: the bones are hollow, like bird bones, and many are fused or joined together to give strength to the wings. However, a closer study makes it clear that the pterosaurs are not in the direct line of the bird group, but are more closely related to another order.

Our knowledge of these winged reptiles owes much to the art of lithography—an early example of the aid rendered to modern science by industry. The search for stone that would faithfully reproduce fine details of a drawing led to quarries in southern Germany where the fossil remains of pterosaurs had been so well preserved that impressions of the wing and tail membranes could be clearly seen. Thus, the bony structure of pterosaurs is as well known as that of most extinct vertebrates.

Their wings are built quite differently from bat or bird wings. The bones of the fourth "finger" were elongated to form an attachment for the wing membrane, which spread between this finger and the hind legs and tail. The other fingers were short claws, and the thumb was either missing or vestigial. A bat's wing, in contrast, has all four fingers elongated to support the membrane, something like the stays of an umbrella, whereas in birds the fingers are coalesced and the wing feathers attached to the skin covering the fingers.

The Baron de Bayet collection of European Jurassic pterosaurs, purchased by Andrew Carnegie and presented to Carnegie Museum in 1903, is probably the largest one of European pterosaurs in the United States. This collection includes, in addition to *Pterodactylus*, several more-or-less-complete skeletons, skulls, and other parts. Among these is *Rhamphorhynchus* (prow-beam), now to be seen

at the Museum, perhaps the best-known Jurassic pterosaur. The skeleton on exhibition has a wingspread of three and a half feet, and boasts a long tail, the tip of which is missing. The skull is rather long, with large eye sockets and sharp conical teeth projecting forward.

Most pterosaurs have small, weak hind feet, and probably did very little walking on the ground. However, *Campylognathus* (crooked-jaw), another Jurassic form, had a long tail and fairly strong hind feet. This skeleton contrasts with the other specimens on exhibit because it is the only one that is encased in a dark matrix, and the bones are black.

A fourth Jurassic genus, *Cycnorhamphus* (swan-beak), is represented by a complete skeleton of a small pterosaur with a skull shaped very much like a bird's, with small teeth. It has a complete ring of sclerotic plates in the eye socket. Probably most pterosaurs, like many reptiles and birds, had this protective ring of bony plates surrounding the eye, but *Cycnorhamphus* is the only one in the Carnegie collection that shows it clearly.

Most of these older pterosaurs, dating from the Jurassic, had not only teeth but very long tails as well, which serve to distinguish them from their Cretaceous successors. The latter, as if by way of compensation, sometimes de-

Dr. Kay, curator of vertebrate fossils at Carnegie Museum, has spent many years in research on the Museum's world-famous collection of Jurassic reptiles. Each summer he adds to this collection by field work in western United States and Canada. He joined the Museum staff in 1915, while working at Dinosaur National Monument in his native Utah.

For those of CARNEGIE MAGAZINE's readers who may be a little hazy on their prehistoric dates, the Mesozoic Era, usually called the Age of Reptiles, was the time in the earth's history when the great dinosaurs lived. The Cretaceous was the latest period of this Era; the Jurassic, the middle; and the Triassic, the earliest.

veloped enormous wings, covering a maximum spread of nearly thirty feet. The two species shown at Carnegie Museum are *Pteranodon* or "toothless one with wings," the largest of all the pterosaurs, and *Nyctodactylus*, both found in the Cretaceous chalk beds of Kansas. Although this Museum has a considerable collection of *Pteranodon* material, there are no complete skeletons in the collection, the one on exhibition being represented by the bones of one wing, which is more than six feet long. The skull also is long, with a prominent occipital crest extending back and slightly upward, as if to balance the large beak. The Carnegie skeleton of *Nyctodactylus* is fairly complete, with parts of the fourth fingers of the wings restored. This specimen, short-tailed and toothless like *Pteranodon*, has a small, slender head and wingspread of about five and a half feet.

How the pterosaurs evolved from earlier reptile forms to become the full-fledged flying reptiles of the Jurassic has yet to be determined. Their habits of life also are still a matter for conjecture. Although they are usually pictured as flying or soaring over the seas, and it has been suggested that they fed on fish found near the surface, I doubt

whether they could light upon the water and take to the air again without great difficulty. Moreover, their hind feet are not constructed for picking up food, like those of a predatory bird. The first three front toes are built for grasping, but probably were used only to cling to a tree or ledge while resting. It seems logical to suppose that they got their food from the air, like bats, at least until such time as further evidence may prove otherwise. Unfortunately there is little immediate hope of learning more about the pterosaurs, since the stone in which they are most likely to be found is no longer quarried for lithography, and funds for extensive research in paleontology are not readily available.

CHRISTMAS CAROL FESTIVAL

(Continued from page 333)

their sojourn of several months in Syria, where their son is working with the American Friends of the Middle East. Mrs. Eliot is coordinator of the Carol Festival.

The two regular presentations of Pittsburgh's brilliant and moving Christmas observance will be held at 2:30 and 4:00 P.M. Marshall Bidwell directs the community singing and combined choirs of six hundred.

For A "Different" Gift

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Courtesy New York Historical Society

... in the Kitchen

"And they came with haste, and found Mary, and Joseph, and the babe lying in a manger."

Luke 2:16

With loving, inspired hands, an Alpine woodcarver several hundred years ago recreated, according to his talent, the unparalleled drama of the Nativity. His medium was humble—a wooden mold for decorating Christmas cakes.

Molds like this, intricately engraved with scenes from the first Christmas, were frequently found in German, Swiss and Austrian kitchens. Fashioned from circles of hardwood, with the Biblical figures carved either in intaglio or relief, they were used to imprint the tops of large wafer-like cakes.

The flavors of these special Christmas cakes varied; but a favorite was the almond-rich *marzipan* which was rolled into a thin circle, imprinted with the mold and lightly browned in a very low oven.

The finished cakes were veritable cameos in dough. But they were more than that. They were the Christian homemaker's way of commemorating the birth of her Saviour.

BOOKS AND BATHTUBS

JOHN A. STEPHENS

OUR country has, I think, reached the point in its economic development where it is no longer necessary to make a choice between books and bathtubs.

We have shown we can provide both guns and butter, so I feel confident we can afford both books and bathtubs, both libraries and license plates. After all, the real income of the average American family—income measured in dollars of stable purchasing power and after the extraction of federal income taxes—has increased by about one-third from the prewar bench mark of 1929. Furthermore, personal earnings of the American people are now at an all-time high. So I think there can be little doubt of the ability of the American people to afford good libraries—if they are wanted.

We need to see steadily mounting evidence that our cultural progress is reasonably in pace with our material advancement. One of the very best ways to supply that evidence would be through steady qualitative and quantitative development of our libraries—public libraries, and the libraries of our schools and institutions of higher learning. The upward curve of support for libraries should ascend at least as fast as the rise in leisure time of the American people.

As to the public libraries depending on public revenues, no magic formula for insuring their creation and progress has yet been devised. It is doubtful that such a formula will ever be devised, for the library is, to a peculiarly high degree, a local institution—an institution of local origin and local administration, reflecting the cultural tastes and desires of the local community, or groups of communities with close social and cultural ties.

I feel quite certain, however, that support of public libraries need not be chained inevitably and immutably to the relative level of the income of the people of a local community or state. I perceive that Massachusetts—leader of states in per-capita support of public libraries—stands fourteenth in per-capita income; while Ohio, ranking but eighth among the forty-eight states in per-capita income, stands second only to Massachusetts in the generosity of its people to their libraries. In some other states the relationship, regrettably, is just the other way around.

Any community possessing little or no library service is an incomplete community. And that goes no matter how many swimming pools, television sets, or sports cars the community may have. I feel sorry for a community that does not have a first-rate public library or has no link at all with library service. That community is denying itself something of practical and, even greater, cultural value. It is denying itself a means of insight into the nature of man, and insight into the nature of our political and economic institutions. It is denying itself a treasure-trove, no matter how small, for refreshment of mind and spirit. It is depriving itself of a priceless source of relaxation and diversion. It is depriving its children, especially, of a child's right to explore literature of proven and enduring value—literature that has made the human spirit soar above even the grubbiest kind of everyday existence.

Now an authority on pedagogy is something I certainly am not. Yet it strikes me that a library of quality, whether it be the local public library, or one in a school or a college, offers a practical, comparatively in-

expensive method of permitting gifted and superior students to forge ahead in their intellectual development. Yes, I believe the library can be an extension of the overcrowded and understaffed classrooms of our schools. Also, libraries are—or should be—everywhere the most accessible institutions to those who do not want to end their education with the end of their formal schooling.

The interest in libraries of those in business and industrial managements, I know, is deep and genuine. Business and industry apprehend the value of libraries from two principal standpoints. One is the value individual employees and a whole community receive from the library as a means of education, of self-improvement, and recreation. The other is the value of the library to the operations and administration of a company, by providing insights into new methods and into new problems, and by providing facts that help in arrival at sound business decisions.

There is no dollars-and-cents gauge of the value of libraries to groups of individuals gathered together for common economic purpose under legal title of Corporation. But need I tell you that business and industrial organizations would not have made the often heavy investments in their own libraries if management were not convinced that these libraries contributed something to

the profit picture—and to the development of the people who are the Corporation.

In United States Steel we have seventeen libraries, spread from New York to Los Angeles. Fourteen of these are highly specialized in the fields of metallurgy, industrial relations, market research, and law. Our three general libraries cover a very wide range of subject matter in their collections, and those who administer them are called upon to provide an even wider range of material. The central library of United States Steel in Pittsburgh, for example, covers any subject relative to the activities of the Corporation. In addition to the obvious topics of engineering and the metals sciences, commerce and economics, industrial relations and safety, accounting and psychology, we have a representative collection on such subjects as religion, agriculture, education, literature, and history.

As the social responsibilities of American private enterprise develop, so must the company library develop to provide exact knowledge of the nature of those responsibilities, and to supply insight into the very best ways of meeting those responsibilities.

The overwhelming majority of business and industrial concerns in America would not, of course, be justified in setting up their own libraries, because their frequency of use would not be sufficient to warrant the investment. On the other hand, no concern, however small, could fail to benefit from authoritative data on economic trends, on markets and manpower, and on technological developments, if those data were readily available.

Without in any way diminishing their stature as cultural institutions, an increasing number of public libraries have stepped into this area of service, efficiently and effectively. They have done so by creating business information divisions. We in Pittsburgh know well the service of the Business Branch of

This article is taken from an address by Mr. Stephens at the seventy-fourth annual conference of the American Library Association in Philadelphia last July. Mr. Stephens is vice-president in charge of industrial relations for the United States Steel Corporation. During the early 1930's he organized and administered New York City's work relief program. Among many activities he is chairman of the industrial relations committee of the American Iron and Steel Institute and vice-chairman of the industrial relations committee of the National Association of Manufacturers. He is active in the Business Advisory Council of the Department of Commerce, the United States Chamber of Commerce, and the International Labor Organization.

Carnegie Library. Since its establishment in 1924, the Business Branch has steadily expanded its scope of service and its collection of books, reference works, business and trade periodicals, government publications, newspapers, and trade and city directories.

May I suggest that it might be to the common benefit of the public libraries and the business and industrial enterprises in small and medium-sized cities if the librarians and business leaders got together and considered setting up business information service in the libraries there. I am thinking particularly of smaller cities transformed during and since World War II from communities with few, if any, industries, into communities now bustling with industrial activity as a result of America's economic growth.

Perhaps the initiative in exploring the possibilities of business information service in the libraries of these cities should come from business and industry. They will be the principal—but not the only—beneficiaries of such a service.

There is the financial problem, I know, in view of the lamentably limited income of many libraries in the smaller industrial cities. Still I believe that a business information service can be started in those libraries at relatively small cost. It might have to start with only a few basic documents such as the *United States Statistical Abstract*, the monthly *Federal Reserve Bulletin*, and a few government and industrial publications carefully selected in the light of the kind of industrial activity predominating in each community.

Once such a service is started, I believe the libraries themselves—and whole communities—will be the chief long-run beneficiaries. For in exploring with librarians the possibility of establishing business information service, the business and industrial leaders will obtain a close-range view of the libraries' problems. In such a relationship,

business and industrial managers in the small and middle-sized communities will become firmer friends and more aggressive supporters of the library.

For their part, the librarians, I am sure, will discover that American industry can make available to their libraries—subject to the same criteria used for selection of material from any other source—many fine factual and objective tracts on America's advancing technology, scientific research, and improvement of the management function.

I should be greatly disappointed if anyone drew the inference that American industrial management regards libraries primarily as handy sources of facts and figures. I assure you that it does not so regard American libraries, its own or those belonging to the people or to educational institutions. It regards them as the means of broadening intellectual horizons. It considers libraries as immensely valuable means of deciding issues, arriving at decisions, and taking actions—on the basis of knowledge, on the basis of seeing the whole picture clearly—whether it be in business, in civic affairs, or at the polls.

Industrial management looks upon libraries not so much as reservoirs of practical data, but as priceless repositories of knowledge about man. It looks upon them as storehouses of knowledge about the institutions of society we must cherish and defend; of knowledge about institutions and ways of thought hostile to human freedom that we must know about in order to combat effectively. It is the responsibility of those in business and industry, in their role as citizens, to safeguard libraries and to fight for the libraries' duty and right to make available literary material presenting diverse points of view. The free institutions of America's spiritual, political, and economic life are not hothouse plants, incapable of retaining their vigor if exposed to contrary convictions.

PITTSBURGH IMPRESSIONS THAT REMAIN

From the Pennsylvania Room's written records of early visitors to the city

ROSE DEMOREST

VOLUMES could be written on the many visitors who came to Pittsburgh, observed the place and its people, and later wrote books of description. Such books are of unique importance in knowing the history of the city as it grew from army post to industrial center.

The period here considered begins as early as 1748, but more especially with 1753, when George Washington praised the location, and comes down to the modern time of Ernie Pyle of World War II fame, who wrote so vividly of the topography of Pittsburgh.

The general feeling about the majority of these books, on the part of the residents, was one of resentment, as most of them contained many complaints, and this was difficult to take at the time they were published. But the visitors continued to come, and the books about this city as well as about other parts of the country were published. They form part of the rare-book collection in Carnegie Library of Pittsburgh, since most of them were never reprinted after the first edition and are now quite scarce and difficult to purchase. They are, however, interesting to read, and in many instances furnish the only connection we have with a certain period of the past, helping us understand life of the early times in the city and providing facts not otherwise obtainable.

The books show, better than any source we have, the great contrast between the present and the past. The early settlers were an independent lot and believed in enjoying the freedom a democracy gave them. The visitors, in turn, made no due allowance for the inconveniences of travel in a pioneer age,

and by the time they reached Pittsburgh, after many days of almost primitive travel, they were in no mood to be pleasant.

The hardships of travel, however, did not deter visitors from coming from faraway places. Some of them were kind in their reporting on the city and what they found here, some were very critical, but all were informative, and it is to these authors we turn for many of the known facts of the early growth and development of the city. So varied is this special collection of books in the Pennsylvania Room at the Library that but a few can be included here as examples, important either for subject matter or for the persons involved.

The early travelers without doubt endured the greatest hardships to reach Pittsburgh. At times it meant miles of walking or riding horseback over rough trails without glimpse of house or cabin, battling the Indians, camping out in cold, snow-capped mountains, killing a deer for fresh meat, building a canoe to cross a suddenly swollen stream, or climbing steep mountains—all this before reaching the small settlement for fur-trading, the first business around Fort Pitt.

One such journey was made in 1759 by James Kenny, a Quaker merchant from Philadelphia. Through his record we learn much of life in the area at the time. He reports that pike weighing twenty pounds were found in the rivers nearby, that a sawmill was built, that large quantities of food were brought by pack horse to feed the soldiers and other inhabitants.

From an early French traveler we know the kinds of trees found in the area. He names

the different species and declares the maples the most wonderful of all because of the great quantities of soft, fresh, sweet water obtained from them, which was boiled down into syrup or hardened into sugar.

Through Meriwether Lewis, the noted explorer, we learn there were labor shortages in 1803. He could not find enough men to speed up the work of building the boats needed for his famous journey down the Ohio.

There was no cessation of arrivals at the settlement. Some came to the fort seeking friends or relatives who had been taken captive by the Indians, and others were business men; there were exiles from foreign countries, land speculators, naturalists, artists, missionaries, adventurers, visiting nobility, and many journalists. The town was growing in size, and the facilities for caring for the large number of travelers increased and improved. When George Washington was here in 1770 he found the inn where he stayed a very good one.

The French nation considered Pittsburgh such an important and strategic frontier place that in 1796 Henri Collot, a general from the French army, was sent to make a complete study of the town. His report contains a full description of the area and also a fine picture and map, both of them very interesting and quite scarce. Some said the General was here as a spy for his country, but no matter what his purpose may have been, his contribution was a fine one.

The largest number of visitors who later published their opinions came from 1800 to the 1840's. Many of these descriptions contained untrue, bitter, and unkind statements

Most of the historical writing in or about Pittsburgh draws upon material in the Pennsylvania Room at Carnegie Library of Pittsburgh. As librarian in charge, Miss Demorest is the indispensable ally of who-knows-how-many successful writers; hence it is a rare pleasure to have an article under her own name.

or evaluations. The residents were referred to as "back-settlement" people, they were accused of having poor manners, being insolent and unfriendly, illiterate and irreligious. The inns found here were hopeless, and the food was poor; the men, especially the stagecoach drivers, were rough, conceited, and quite independent. Such a picture painted by some of the writers could well have been refuted and denied, but except for expressing resentment, little was ever done about it locally. Time has proved that the visitors never recognized or accepted the traits as evidences of a new and formative era emerging from the struggle to survive in a wilderness.

A study of these books, omitting the personal insults, shows that a valuable contribution was made toward understanding the city at different periods. Many citizens probably agreed with the complaints, especially those concerning public transportation and public eating places. Needless to say, other cities fared worse at times than Pittsburgh in these same books. Travel remained a great hardship for some time, and at best was a test of physical endurance.

To a number of others who were in Pittsburgh for specific purposes, personal inconvenience meant little. Among these were Conrad Weiser, a noted Indian agent; French explorers from Canada; Robert Orme, a military prisoner of the French; Mathew Clarkson, a business agent who came to provide Fort Pitt with supplies; David McClure, Charles Beatty, and David Jones, ministers; Johann Schoepf, a German physician; William Cobbet, a noted English economist; James Buckingham from Parliament; and many English journalists. Perhaps the most spectacular person of all was not a foreign visitor but a newspaper woman from Washington, D. C., Ann Royal, who created a sensation wherever she went. No doubt the most welcome of

them all was Charles Dickens, the beloved English novelist.

All these well-known and well-informed people were here before 1850 and put in writing their impressions of the city. With a two-hundredth birthday anniversary of the city but a few years away, all writings that might contribute to an understanding of former years loom more important than ever.

Some of the journalists praised the place to encourage future settlers, others were impressed by the types of keel- and flatboats on the rivers, while others saw nothing that impressed them—complained of the noise from the busy forges, noted a lack of admirable public buildings, and didn't like the mud and smoke.

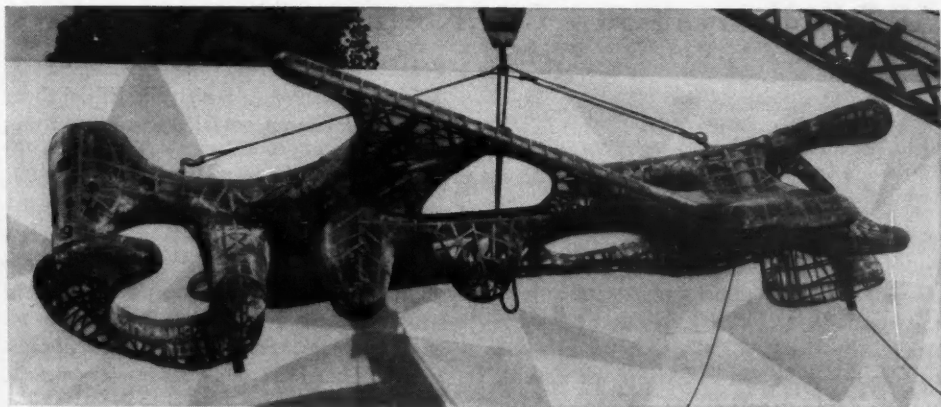
Ann Royal arrived in Pittsburgh in December 1828 and remained thirteen days. She was preceded by much fanfare, resulting from trouble she had created in other places she had visited. She stated she had long wanted to visit here because she felt no other writer had truthfully represented the place. As an inquiring reporter she was far in advance of her time, and she expected answers to many personal questions, which made her unwelcome in most circles. She berated all who opposed her and had violent dislikes that she expressed in explosive manner. Compared with her exhibitions of fury in other cities, her stay here was tame. After all, 1828 was an early period for a woman investigator to be accepted generally, but that did not deter her search nor prevent her from obtaining the facts she needed, and the results are a good report on Pittsburgh. She visited shops and public institutions, interviewed citizens, scolded the servants at the hotel for not giving prompt service, and walked miles through rain, mud, and snow to view the city. She was in favor of almost everything she saw and was much impressed with the iron foundries and glassworks, describing these

fully as to their owners and production statistics. Her writings are important source records, and her tirades are easily forgotten in view of the value of her facts and her vivid descriptions.

The most famous person of all, in this group of contributors to a description of the city at different periods, was Charles Dickens. He arrived in March 1842 for a visit of three days. After a tiresome journey by way of the canal, which impressed him for its beauty and distressed him for its discomforts, he enjoyed a quiet visit with no public demonstrations. One newspaper commented, "We want him to see us as we are" and "hope he was pleased with our quiet hospitality." This was in sharp contrast to the fabulous affairs arranged for him in other cities. Dickens stayed at the Exchange Hotel, which he considered an excellent place. He walked about the city at his pleasure, visited the prison, compared the city to Birmingham, thought the Arsenal was pretty, referred to the villas of the wealthier citizens located on the hills as quite attractive, and was amiable to the few who called upon him. Pittsburgh fared better than many other cities in the book written after his visit to this country. His followers and admirers everywhere were stunned and hurt, as his criticisms were frequent and very pointed; it was considered a poor return for the honors accorded him wherever he went.

The years pass and times change, and we now call such visitors "tourists" and continue to wonder what they will write about the city. Hotel facilities are highly developed, conveniences are extensive, and transportation is swift, but there will continue to be new and unexplored complaints in modern times. The urge to write impressions is strong within many persons. Among these in recent years was the late Ernie Pyle, the beloved war

(Turn to page 353)



It's a "FUN TREE"

Children love to clamber over weird-looking objects, so finally a special "Fun Tree" at Lakeside Park, Oakland, California, has been built for that very purpose. The framework is made from steel pipe and metal lath, and is covered with plaster.



UNITED STATES STEEL

ART AND NATURE BOOKSHELF

HYMNS AND HUMAN LIFE

By ERIK ROUTLEY

Philosophical Library, New York City, 1953

346 pages (\$6.00)

Carnegie Library no. 245 R78

CONGREGATIONAL singing has always been accepted, at least in theory, as a basic element in Protestant church worship. It is the hymns that most directly affect the average man in the pew. Only by joining in the singing of hymns can he feel himself a member of a congregation rather than of an audience. Hymn-singing has a tremendous emotional influence, which has brought about a good deal of controversy in various denominations regarding the use of hymns.

A hymn is any religious poem of a lyrical character. One writer, Harvey B. Marks, makes these distinctions: "A hymn is an ode of praise to Almighty God. A gospel song is a religious exhortation to fellow man, and a carol is a simple narrative in verse of some outstanding biblical event." A hymn, then, is essentially devotional, whereas a carol is more festive or playful in character, telling of the shepherds and wise men, the Holy Family, or some form of celebration pertaining to the Christmas season.

In recent years several outstanding books on hymns have appeared. For the lay reader, I can most heartily recommend Erik Routley's *Hymns and Human Life*.

The reader is immediately impressed with the author's attractive, almost breezy, lightness of touch. It is a decidedly entertaining book, and in this respect differs from most other books on hymnody.

Dr. Routley states in his preface that hymns are part of history; they can rarely be assessed or appreciated without some knowledge of their authors. Not everybody likes

hymns; some people positively dislike them, this dislike being only less than what they feel for the people who sing them.

Dr. Routley is an Englishman. In his introductory chapter, speaking of the English hymns, the author makes the following statements: "Hymns are the folk song of the church militant. They are, essentially, the people's music. Some of our hymns have become an integral part of English thought and speech. They have found their way into the people's consciousness by straight speaking, economy of words, and clear thinking. Our hymns are a great national heritage, and at times of stress or exaltation, when the most casual of us reach out toward the merciful, delivering, ennobling power of God, we turn to our hymns and find in them what we were looking for."

In the following chapters, Dr. Routley undertakes to show how hymns have come out of human history, how people have used and invented and reacted to hymns in the past. There are important distinctions to be made among four kinds of hymns. First, there are the Psalms in their original Hebrew and translations in the authorized Latin or English, resulting in the Catholic plain song and the Angelican chant of the Church of England. Second, there are metrical versions of the Psalms, arranged for singing to measured hymn tunes. Thirdly, we have the free paraphrases of the Psalms by such pioneers as Watts and Montgomery; and finally, there are the original hymns from all periods of history.

Of course, hymns of a kind, quite distinct from the Psalms, were not unknown in the early church. The earliest Christians wanted hymns to express their experience, as a means of binding them one to another, and,

more specifically, as a vehicle of worship.

We shall have to pass over those chapters that tell how hymn-singing developed during the Middle Ages. The chief interest for this reviewer begins with the fourth chapter, "The Reformers—How Hymns Came to Life." It seems that the Reformers taught Christendom how to sing hymns, although the Reformers disagreed strongly among themselves about the use of hymns. Martin Luther felt it was more important for people to sing than to try to make careful distinctions between sacred and secular songs. So he "borrowed the tunes from the Devil"—the secular love songs from the streets—put them to sacred words, and the people sang them with enthusiasm. Calvin, on the other hand, developed a distinctive church idiom, and kept the hymns apart and unspotted by the world.

For the Puritans, the words of Scripture carried an authority they could concede to no other words: "What the Bible says you may sing, that you may sing, and nothing else."

The Psalm-singing Puritans ruled out any interpretation of the original thought by later experience. Puritanism was an army on the march; first in the kirks of John Knox's Scotland, and then in the meetinghouses of Cromwell's and Milton's England, for Puritanism became identified with the movement to oppose the divine right of kings and for the abolition of tyranny.

But there was a great limitation on psalmody, and against this limitation a powerful voice was raised at the beginning of the eighteenth century. Isaac Watts protested against the dullness and crudity of expression, and the total lack of New Testament gospel in the contents of the Psalms. He took from the Psalms that quality of wonder that gave him a poet's touch. In such hymns as *When I survey the wondrous cross*, or *Our God, our Help in ages past*, or *Jesus shall reign*, he liberated

English hymnody by "setting free the English Protestant Christian to wonder and adore."

The Calvinist stream came in through Watts, the warm Lutheran stream through the Wesleys. Lutheran hymnody has been largely that of the family circle and the locality. The local Lutheran pastor, confronted by some crisis in his village, composed a hymn for the occasion. The Thirty Years' War brought *Wachet auf* (*Wake, O wake, with tidings thrilling*), which has been called "the King of Chorales"; *Wie schön leuchtet der Morgenstern* (*O morning star, how fair and bright*), the "Queen of Chorales"; and *Nun danket alle Gott* (*Now thank we all our God*).

The Wesleys resolved that their people should sing their way to revival, whereas Watts's hymns were designed to be sung in church. Wesley's were written for private devotion and for the enormous open-air congregations to which he and his brother administered. Watts is, therefore, the father of the liturgical hymn, while Wesley is the father of the enthusiastic or devotional hymn in our language.

The greatest period of hymn-writing was the century from 1750 to 1850. The author deals with the hymn-writers of this period—what sort of people they were. They came mostly under the following classifications: bishops and the clergy, such names as Newton, Heber, Cowper, Toplady, Lyte, and Keble; men of letters, such as Milton, Bunyan, Carlyle, Montgomery; and women hymn-writers, such as Charlotte Elliott, author of *Abide with me*; Mrs. Alexander, wife of the Primate of Ireland, who wrote *There is a green hill*; and Catherine Winkworth, who translated so many of the hymns from the German, such as *Now thank we all our God*.

The chapter on American hymn-writers includes such names as William Cullen Bryant,

Oliver Wendell Holmes, John Greenleaf Whittier, Harriet Beecher Stowe, and Ray Palmer.

In the chapter on American hymn-writers the author touches on the revival hymns of Dwight L. Moody and Ira D. Sankey. He states that the revival hymn and tune was the refuge of the dispossessed people of American and England. A condition of dejection and homelessness helped the revivalist movement. It is folk music with the same yearning and nostalgia for a heavenly home heard in the Negro spirituals, as *Safe in the arms of Jesus* and *There were ninety and nine*.

"The revival hymns brought religion to people who were untouched by the established forms of churchmanship; they brought faith to a generation for which the church had found itself totally unprepared." Sankey and Moody preached conversion and salvation; "they made much of the lost sheep

and the prodigal son, and brought thousands to a peace of mind that saved them from despair and even suicide."

In his last chapter, entitled "The Shame and the Glory of Hymnody," the author states that a hymn must pass two tests. First, as a piece of craftsmanship in literature, it must not offend against the rules of grammar, syntax, or scansion. Second, it must be suitable for congregational praise. If it detracts from the act of worship by its obscurity, by irrelevance, or by seductive language or music, it fails. "Let a hymn say nothing that could not be said in the presence of God. That is to say, let it avoid hatred, contempt, irreverence, and triviality."

A good hymn does not offend a congregation by making it say something it could not be wanting to say or required to say. "What is right for a congregation of down-and-outs in Leeds is possibly wrong for a congrega-

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tion of solicitors in Littlehampton."

"The glory of our hymnody is in its power for converting unbelief, strengthening faith, and binding together the Christian community. The shame of our hymnody is in its unreality, complacency, and spiritual slovenliness. We do wrong, at this time of day, to make the Christian challenge seem falsely easy; therefore it is wrong for an educated congregation to sing Sankey. We do wrong to reach too low, to identify the Faith with a social programme; we do wrong to take refuge in hymn-singing from the exactions of the world."

He might have added that gospel songs deal mostly with the first stage in the Christian life—conversion, and with the final stage—going to heaven. It omits much that pertains to the Christian's spiritual development. Surely the gospel song has its use in missions and evangelistic groups, but it hardly belongs in the larger work of the church.

The author quotes a few words from C. S. Lewis about hymn-singing: "Is it obvious that people are edified by being allowed to shout their favorite hymns? I am well aware that the people like it. They equally like shouting *Auld Lang Syne* in the streets on New Year's Eve. I do not yet seem to have found any evidence that the physical and emotional exhilaration that it produces is necessarily, or often, of any religious significance. . . . We must beware of the idea that our music can 'please' God as it would a cultivated human hearer. That is like thinking, under the old Law, that He really needed the blood of bulls and goats. All our offerings, whether of music or martyrdom, are like the intrinsically worthless present of a child, which a father values indeed, but values only for the intention."

Dr. Routley concludes: "There is the heart of the matter. The shame and the glory are in the intention." —MARSHALL BIDWELL

THE RISE AND FALL OF MAYA
CIVILIZATION

By J. ERIC S. THOMPSON

University of Oklahoma Press, 1955

287 pages, 24 plates, 20 figures, 1 map (\$5.00)

Carnegie Library no. 913.72 T382r

IN 1839 John Stevens and Frederick Catherwood made the first of their exploratory journeys into the unknown jungles of steaming Central America. The two sets of books that resulted from this and a later trip have for years stimulated the curiosity of scientists and laymen alike, with their marvelously accurate drawings and fascinating descriptions of ancient cities, palaces, and temples.

For this was the real discovery of the brilliant, lost Maya civilization—a civilization that reached its peak during the time of the Dark Ages in our own western civilization. These were the people who, already deep in a period of cultural decline, met the Spanish conquerors without knowledge of the wheel or gunpowder but with a calendar more accurate than the Gregorian calendar then used by Europeans, a science of mathematics noted for its basic theoretical contributions, and a way of life as well as a written language based on premises entirely different from those of the western world.

Although several scientific institutions have carried out long-term anthropological research programs in the Maya area, little has heretofore been written that utilizes this vast store of archeological and ethnological information in building a comprehensive picture of Ancient Maya civilization, viewed in broad historical and philosophical perspective.

J. Eric S. Thompson, an archeologist with Carnegie Institution of Washington since 1935, has devoted more than a quarter of a century to investigating the Maya. In this period he has made ten field trips to Central America for exploration and excavation. Mr.

Thompson is best known as one of the very few experts in Maya hieroglyphic writing, his 1950 book on the subject being a classic in the field. An expert himself and a worker in the Institution that has carried out more research on the Maya than any other organization, Mr. Thompson has ample resources to do a really first-rate job on the task he sets in the title.

In a prologue outlining various problems, Thompson sets the tone for his entire work.

"It is not enough then," he says, "to illustrate Maya civilization with descriptions and photographs of its outstanding accomplishments in architecture and sculpture, astronomy and arithmetic. One must, as far as possible, show in the details of the daily life of the Maya and in studies of their religious conceptions and of their philosophy of life the soil in which those more spectacular manifestations of their culture germinated and grew to fruition."

Thompson relates his interest in a fuller knowledge of Maya civilization to the general problems of the growth and decay of civilization, such as the search for laws or generalizations by scholars like Arnold Toynbee and A. L. Kroeber. That there is a basic underlying motive in his writing is apparent, and, as Thompson puts it:

"For me, the supreme problems are what made Maya civilization succeed in ways that are not our ways, and how through its study one can bring home the truth our civilization hesitatingly accepts, that for nations and individuals spiritual values are far more important than material prosperity."

This statement of interest is followed by general background information on geography and environment, language and population, physical appearance and psychological traits, as well as a brief history of research on the Maya.

In succeeding sections of the book the



Detail from a stone time-marker found at Seibal, Peten Department, Guatemala. Naturalism is combined with pure design in this magnificent example of Maya low relief. (After Maler, 1908, from George C. Vaillant's *Artists and Craftsmen in Ancient Central America* published 1935 by the American Museum of Natural History).

"Rise and Florescence of Maya City States" and the "Decline and Fall of Maya Civilization" are presented in detail, not as dry recitation of dusty archeological fact but as understanding human discussions of people and places, well grounded in sober scientific fact, which has been drawn from excavations, contemporary observation, and documentary research.

Chapters on "Intellectual and Artistic Achievement" and "Maya Religion" set the stage for one of the most significant parts of the whole volume, "Sketches of Maya Life." In this short section Thompson recreates episodes in Ancient Maya life, using a mixture of fiction and science to give color and reality to the panorama of action he discusses as an archeologist-historian. While some scientists may balk at this technique, a sober realization of current intangibles justifies the procedure, at least to this reviewer. The method goes a long way toward making many of the specific historical problems

known to the general reader.

In the final chapter on "Maya Civilization in Retrospect," Thompson sees three great characteristics of Maya temperament—devoutness, moderation, and discipline—as responsible for the accomplishments of the Classic Period. The flaunting of these resulted in the decline characteristic of the last period in preconquest Maya history.

Providing plenty of solid archeological fact and theory, a good list of selected readings as well as a quick synopsis of Maya history, the final chapter emphasizes again the burden of the archeologist in the modern practical world. Information about people of the past is not restricted in usefulness to other archeologists. Philosophers, historians, and all intelligent men of broad interest can find much of significance in the work of the excavator. When the archeologist writes, as Thompson does, from broad general knowledge and relates his specialized information to concrete and familiar situations, the product is a provocative and pleasurable experience.

—WILLIAM J. MAYER-OAKES

PITTSBURGH IMPRESSIONS

(Continued from page 346)

correspondent. His remarks were brief and pungent when he wrote, "Pittsburgh is a crazy-quilt place, the only place in this country where I can't find my way around." This was his way of describing the geography of the city with its irregular hills, cliffs, valleys, and rivers. He created not resentment, but mild good humor, with his vivid writing on the topography of Pittsburgh.

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